

Jan Delaval please

Access DB# 120098

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sabika Ozy Examiner #: 74141 Date: 4/21/04
Art Unit: 1616 Phone Number: 20622 Serial Number: 101057423
Mail Box and Bldg Room Location: 4670 Rem. 4445 Results Format Preferred (circle): PAPER DISK E-MAIL
MEJ

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Process of Irrigation of Soil & water

Inventors (please provide full names):

Simon Alexander Hanson Rose et al.

Earliest Priority Filing Date: 7/27/1999. (See 09/361,816)

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please for the soil treatment as in cl 1
and composition...

Please see attached sheet

Thank you

Internet may be a
good place other
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For Jan

STAFF USE ONLY

Staff Use Only	Type of Search	Vendors and cost where applicable
Searcher: <u>Jan</u>	NA Sequence (#) _____	STN <input checked="" type="checkbox"/>
Searcher Phone #: <u>22504</u>	AA Sequence (#) _____	Dialog _____
Searcher Location _____	Structure (#) _____	Questel/Orbit _____
Date Searcher Picked Up: <u>4/22</u>	Bibliographic <input checked="" type="checkbox"/>	Dr. Link _____
Date Completed: <u>4/22</u>	Langston _____	Lexis/Nexis _____
Searcher Prep & Review Time _____	Fulltext _____	Sequence Systems _____
Clerical Prep Time: <u>10</u>	Patent Family _____	WWW/Internet _____
Online Time: <u>420</u>	Other _____	Other (specify) _____

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(FILE 'HOME' ENTERED AT 17:42:31 ON 22 APR 2004)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 17:44:08 ON 22 APR 2004

L1 1 S (US20020136749 OR US20010018047)/PN OR GB98-16784/AP,PRN
E ROSE S/AU
L2 83 S E3,E4
E ROSE SIMON/AU
L3 5 S E4
E TURNER J/AU
L4 240 S E3-E7
E TURNER JAYNE/AU
L5 1 S E4
SEL RN L1

FILE 'REGISTRY' ENTERED AT 17:46:23 ON 22 APR 2004

L6 8 S E1-E8
L7 3 S L6 AND PMS/CI
L8 1 S 79-06-1
L9 13079 S 79-06-1/CRN
L10 1 S 79-10-7
L11 53425 S 79-10-7/CRN
L12 3082 S L9 AND L11
L13 768 S L12 AND (NA OR K OR LI)/ELS
L14 242 S L13 AND NR>=1
L15 526 S L13 NOT L14
L16 14 S L15 AND 3/NC
L17 1 S 15214-89-8
L18 4289 S 15214-89-8/CRN
L19 619 S L9 AND L18
L20 284 S L19 AND (NA OR K OR LI)/ELS
L21 7 S L20 AND 3/NC
L22 23 S L16,L21,L7

FILE 'HCAPLUS' ENTERED AT 17:51:07 ON 22 APR 2004

L23 1843 S L22
L24 95 S L23 AND SOIL#/SC,SX,CW,BI
L25 35 S L24 AND FERTIL?/SC,SX
L26 10 S L24 AND FERTIL?/CW,BI
L27 21 S L24 AND AGR?/SC,SX,CW,BI,RL
L28 37 S L25-L27
L29 37 S L24 AND L28
L30 58 S L24 NOT L29
L31 3 S L2-L5 AND L29
L32 2 S CIBA?/PA,CS AND L29
L33 3 S L1,L31,L32
L34 34 S L29 NOT L33
L35 26 S L34 AND (PY<=1999 OR PRY<=1999 OR AY<=1999)
SEL DN AN 9 13
L36 24 S L35 NOT E9-E14
L37 27 S L33,L36
L38 10 S L34 NOT L37

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FILE 'HCAPLUS' ENTERED AT 17:57:32 ON 22 APR 2004
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FILE COVERS 1907 - 22 Apr 2004 VOL 140 ISS 17
FILE LAST UPDATED: 21 Apr 2004 (20040421/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L37 ANSWER 1 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 2001:156623 HCAPLUS
DN 134:207329
ED Entered STN: 06 Mar 2001
TI Binders for culture **soil** comprising anionic polymers and culture **soil** containing the binders
IN Iwakuma, Masaki; Yokoji, Taro; Nakamura, Masafumi; Motooka, Shigeji
PA Sumika Nogyo Shizai K. K., Japan; Minoru Sangyo K. K.
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A01G001-00
ICS C09K017-20; C09K017-22; C09K101-00
CC 19-6 (Fertilizers, Soils, and Plant Nutrition)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001057813	A2	20010306	JP 1999-234670	19990820 <--
PRAI	JP 1999-234670		19990820 <--		

AB Culture **soil**, which is useful for pot culture of seedlings and suitable for machine transplanting, contains polymers having anionic functional group with anionicity 25-70 mol%. Cultivation of onion seedlings using pots packed with **soil** containing acrylamide-Na acrylate copolymer (anionicity 25.7 mol%) and transplantation of the seedlings.

ST seedling pot culture **soil** anionic polymer binder; acrylamide sodium acrylate copolymer binder seedling culture **soil**

IT Polyelectrolytes
(anionic; seedling culture **soil** containing anionic polymers as binders suitable for machine transplanting from pot)

IT Binders
Seedling
Soils
(seedling culture **soil** containing anionic polymers as binders suitable for machine transplanting from pot)

IT 25085-02-3, Acrylamide-sodium acrylate copolymer 84233-77-2, Acrylamide-2-acrylamido-2-methylpropanesulfonic acid-sodium acrylate copolymer
RL: AGR (Agricultural use); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(seedling culture **soil** containing anionic polymers as binders suitable for machine transplanting from pot)

IT 25085-02-3, Acrylamide-sodium acrylate copolymer
RL: AGR (Agricultural use); MOA (Modifier or additive use); BIOL

(Biological study); USES (Uses)

(seedling culture **soil** containing anionic polymers as binders
suitable for machine transplanting from pot)

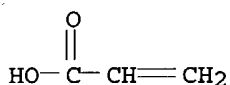
RN 25085-02-3 HCAPLUS

CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX
NAME)

CM 1

CRN 7446-81-3

CMF C3 H4 O2 . Na

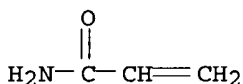


● Na

CM 2

CRN 79-06-1

CMF C3 H5 N O



L37 ANSWER 2 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:464601 HCAPLUS

DN 133:88951

ED Entered STN: 11 Jul 2000

TI Polymer binders for **soils**, **soils** containing the
binders for seedling pot culture, manufacture of the **soils**, and
solidification of **soils** using the binder

IN Iwakuma, Masaki; Nakamura, Masafumi; Soeda, Yasutaka; Motooka, Shigeji

PA Sumika Nogyo Shizai K. K., Japan; Minoru Sangyo K. K.

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM A01G001-00

ICS A01G001-00; C09K017-20; C09K017-32; C09K101-00

CC 19-4 (**Fertilizers**, **Soils**, and Plant Nutrition)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000188947	A2	20000711	JP 1998-365566	19981222 <--
PRAI	JP 1998-365566		19981222 <--		

AB **Soils** for raising seedlings are solidified by mixing base
soils with the binder polymers which show anionicity (expressed as
a content of acidic functional group) ≤ 70 mol%, in which ≥ 30
mol% of the acidic group is divalent cation salts. Seedlings raised in
pots packed with the **soil** form elastic root part and are easily
plucked from the pot when mech. transplanted. Acrylamide-Na acrylate

copolymer (anionicity 17.0 mol%) was treated with an aqueous solution of $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$ at 20° until 40 mol% of the Na ion was substituted with Ca. The polymer binder was mixed with granular soil for rice and H_2O , and used for pot cultivation of onion.

ST acidic polymer divalent cation salt binder pot soil; acrylamide sodium acrylate copolymer calcium exchange seedling culture soil

IT Polyelectrolytes

(anionic; preparation of partially Ca-substituted acrylamide-Na acrylate copolymer as binders for soils used in pot culture of seedlings)

IT Seedling

Soil amendments

Soils

(preparation of partially Ca-substituted acrylamide-Na acrylate copolymer as binders for soils used in pot culture of seedlings)

IT 10043-52-4DP, Calcium chloride, reaction products with Acrylamide-sodium acrylate copolymers 25085-02-3DP, Acrylamide-sodium acrylate copolymer, reaction products with calcium chloride 84233-77-2DP, Acrylamide-2-acrylamido-2-methylpropanesulfonic acid-sodium acrylate copolymer, reaction products with calcium chloride

RL: AGR (Agricultural use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of partially Ca-substituted acrylamide-Na acrylate copolymer as binders for soils used in pot culture of seedlings)

IT 25085-02-3DP, Acrylamide-sodium acrylate copolymer, reaction products with calcium chloride

RL: AGR (Agricultural use); IMF (Industrial manufacture); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of partially Ca-substituted acrylamide-Na acrylate copolymer as binders for soils used in pot culture of seedlings)

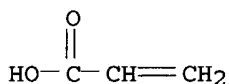
RN 25085-02-3 HCAPLUS

CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 7446-81-3

CMF C3 H4 O2 . Na

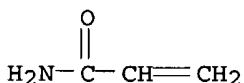


● Na

CM 2

CRN 79-06-1

CMF C3 H5 N O



AN 2000:314651 HCAPLUS
 DN 132:307820
 ED Entered STN: 15 May 2000
 TI **Fertilizer** compositions comprising anti-drift agents
 IN **Rose, Simon Alexander Hanson; Snowden, Jayne Anne**
 PA **Ciba Specialty Chemicals Water Treatments Limited, UK**
 SO PCT Int. Appl., 31 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C05G003-02
 ICS C05G003-00
 CC 19-6 (**Fertilizers, Soils, and Plant Nutrition**)
 Section cross-reference(s): 5

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000026160	A1	20000511	WO 1999-EP7995	19991021
	W:				
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	RW:				
	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	EP 1129052	A1	20010905	EP 1999-953910	19991021
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	AU 761016	B2	20030529	AU 2000-10423	19991021
	US 6288010	B1	20010911	US 1999-428100	19991027
	ZA 2001003368	A	20011128	ZA 2001-3368	20010425
PRAI	GB 1998-23752	A	19981030		
	WO 1999-EP7995	W	19991021		

AB An aqueous composition comprises a inorg. water-soluble compound in an amount of at least

10 % and an anti-drift agent which is a water soluble anionic polymer of intrinsic viscosity at least 6 dL/g, which is formed from a water-soluble monomer or monomer blend. The water-soluble polymer is present in an amount up to 1.9 weight % based on weight of composition. The composition can be a liquid **fertilizer** concentrate that can conveniently be applied through conventional spray distribution equipment, without the need for addnl. dosing of anti-drift control chems. Said composition (1) can be a low viscosity liquid anti-drift agent that can be combined with a herbicide or pesticide in conventional spray distribution equipment.

ST **fertilizer** herbicide compn antidrift agents

IT **Fertilizers**

Polyphosphates

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (fertilizer formulations containing anti-drift agents)

IT Herbicides

(herbicide formulations containing anti-drift agents)

IT 25085-02-3, Sodium acrylate-acrylamide polymer 69418-26-4

RL: MOA (Modifier or additive use); USES (Uses)

(anti-drift agent for **fertilizer** and herbicide formulations)

IT 6484-52-2, Ammonium nitrate, biological studies 7447-40-7, Potassium

chloride, biological studies 7722-76-1, Monoammonium phosphate

7778-77-0, MonoPotassium phosphate 7778-80-5, Potassium sulfate,

biological studies 7783-20-2, Ammonium sulfate, biological studies

7783-28-0, Diammonium phosphate 10124-37-5, Calcium nitrate

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)

(fertilizer formulations containing anti-drift agents)

IT 1071-83-6, Glyphosate 7758-11-4, Dipotassium phosphate
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (herbicide formulations containing anti-drift agents)

RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE

- (1) Allied Colloids Ltd; WO 9114365 A 1991 HCAPLUS
- (2) Chamberlain, P; US 5525575 A 1996 HCAPLUS
- (3) Hazen, J; US 5550224 A 1996 HCAPLUS
- (4) Montedison, S; GB 2107986 A 1983 HCAPLUS
- (5) Vartiak, J; US 3360356 A 1967 HCAPLUS

IT 25085-02-3, Sodium acrylate-acrylamide polymer
 RL: MOA (Modifier or additive use); USES (Uses)
 (anti-drift agent for **fertilizer** and herbicide formulations)

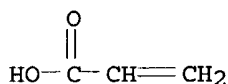
RN 25085-02-3 HCAPLUS

CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 7446-81-3

CMF C3 H4 O2 . Na

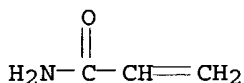


● Na

CM 2

CRN 79-06-1

CMF C3 H5 N O



L37 ANSWER 4 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 2000:117127 HCAPLUS

DN 132:155688

ED Entered STN: 18 Feb 2000

TI Soil treatment compositions and their use

IN Rose, Simon Alexander Hanson; Turner, Jayne Anne

PA Ciba Specialty Chemicals Water Treatments Limited, UK

SO PCT Int. Appl., 24 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C09K017-18

ICS C09K017-22; C05G003-00; C05G003-04; C05C009-00

CC 58-5 (Cement, Concrete, and Related Building Materials)

Section cross-reference(s): 19

FAN.CNT 1

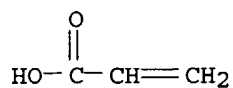
PATENT NO.

KIND DATE

APPLICATION NO. DATE

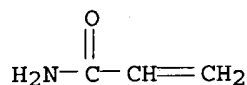
PI WO 2000008114 A1 20000217 WO 1999-EP5126 19990719 <--
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
AU 9956183 A1 20000228 AU 1999-56183 19990719 <--
AU 744421 B2 20020221
EP 1105443 A1 20010613 EP 1999-942789 19990719 <--
EP 1105443 B1 20031112
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
AT 254159 E 20031115 AT 1999-942789 19990719 <--
US 2001018047 A1 20010830 US 2001-838430 20010419 <--
US 2002136749 A1 20020926 US 2002-57423 20020124 <--
PRAI GB 1998-16784 A 19980731 <--
WO 1999-EP5126 W 19990719
US 1999-361816 A3 19990727
AB The invention provides aqueous **soil** treatment compns. comprising water and dissolved ionic water-soluble **fertilizer** in an amount of ≥ 10 weight% and dissolved water-soluble anionic polymer having ≥ 6 dL/g and ionic content ≥ 40 weight%. Such concs. can have low viscosity and be pourable and be used as concs. for dilution in irrigation processes.
ST **soil** stabilization **fertilization** treatment compn
IT **Soil** stabilization
Soil stabilizing agents
(**soil** treatment compns. and their use)
IT **Fertilizers**
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(**soil** treatment compns. and their use)
IT 57-13-6, Urea, uses 6484-52-2, Ammonium nitrate, uses 7783-20-2, Ammonium sulfate, uses 12136-45-7, Potash, uses 15245-12-2, Calcium ammonium nitrate 25085-02-3, Acrylamide-sodium acrylate copolymer 40623-73-2, Acrylamide-AMPS copolymer 144503-03-7
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(**soil** treatment compns. and their use)
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Leonard, J; US 4227911 A 1980 HCAPLUS
(2) Linz, C; EP 0415141 A 1991 HCAPLUS
(3) Sylling, T; WO 8501938 A 1985 HCAPLUS
(4) Sylling, T; WO 8606714 A 1986 HCAPLUS
(5) Tielmans, F; DE 3344638 A 1985 HCAPLUS
IT 25085-02-3, Acrylamide-sodium acrylate copolymer 40623-73-2, Acrylamide-AMPS copolymer 144503-03-7
RL: BUU (Biological use, unclassified); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)
(**soil** treatment compns. and their use)
RN 25085-02-3 HCAPLUS
CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)
CM 1
CRN 7446-81-3

CMF C3 H4 O2 . Na



● Na

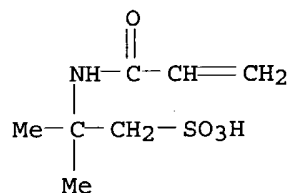
CM 2

CRN 79-06-1
CMF C3 H5 N O

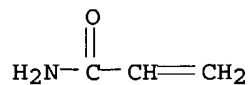
RN 40623-73-2 HCAPLUS

CN 1-Propanesulfonic acid, 2-methyl-2-[(1-oxo-2-propenyl)amino]-, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 15214-89-8
CMF C7 H13 N O4 S

CM 2

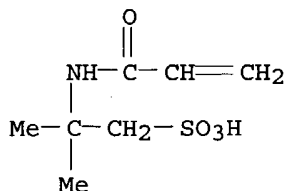
CRN 79-06-1
CMF C3 H5 N O

RN 144503-03-7 HCAPLUS

CN 2-Propenoic acid, sodium salt, polymer with 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid (9CI) (CA INDEX NAME)

CM 1

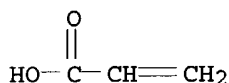
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CM 2

CRN 7446-81-3

CMF C3 H4 O2 . Na



● Na

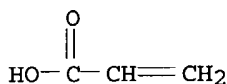
L37 ANSWER 5 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1999:728153 HCAPLUS
 DN 131:322105
 ED Entered STN: 17 Nov 1999
 TI Manufacture of cultivation soil from dewatered sludge cake of
 inorganic wastewater
 IN Kato, Nobuo; Nishimura, Hiroyuki; Abiko, Seiji
 PA Telnite Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 5 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 IC ICM C09K017-48
 ICS C02F011-00; C09K101-00
 CC 19-6 (Fertilizers, Soils, and Plant Nutrition)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11315280	A2	19991116	JP 1998-122119	19980501 <--
PRAI	JP 1998-122119		19980501 <--		

AB The soil is manufactured by (1) mixing dewatered cake of inorg.
 sludge with water-soluble polymers, (2) classifying the mixture, (3) adding
 soil amendments such as bark compost, leaf mold, peat moss, etc.,
 and optionally fertilizers to the mixture, and then (4) curing the
 mixture Lime-based solidifying agents and/or CaO may be added after the
 addition of water-soluble polymers and neutralization of pH may be performed
 before the curing process by contacting with air. Dewatered cake obtained
 from flocculation process for quarry wastewater was kneaded with guar gum
 and the mixture was sieved to remove ≤ 1 mm and ≥ 10 mm
 particles,. The sieved product was cured indoors for 7 days and then
 mixed with bark compost to give plant cultivation soil. The
 soil was further mixed with complex fertilizer and Ca
 superphosphate and used for cultivation of komatsuna.
 ST inorg sludge dewatered cake water sol polymer cultivation soil;
 quarry wastewater dewatered sludge gum amendment cultivation soil

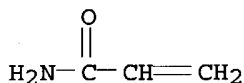
- IT Leaf
Sawdust
(compost; manufacture of cultivation **soil** from dewatered sludge cake of inorg. wastewater, **soil** amendments, and optionally **fertilizers**)
- IT Wastewater treatment sludge
(dewatered; manufacture of cultivation **soil** from dewatered sludge cake of inorg. wastewater, **soil** amendments, and optionally **fertilizers**)
- IT Rice (Oryza sativa)
Rice (Oryza sativa)
(husk, compost; manufacture of cultivation **soil** from dewatered sludge cake of inorg. wastewater, **soil** amendments, and optionally **fertilizers**)
- IT Compost
Gums and Mucilages
Recycling
Soil amendments
Sphagnum
(manufacture of cultivation **soil** from dewatered sludge cake of inorg. wastewater, **soil** amendments, and optionally **fertilizers**)
- IT **Fertilizers**
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(manufacture of cultivation **soil** from dewatered sludge cake of inorg. wastewater, **soil** amendments, and optionally **fertilizers**)
- IT Mining
(quarry; manufacture of cultivation **soil** from dewatered sludge cake of inorg. wastewater, **soil** amendments, and optionally **fertilizers**)
- IT Chaff
Chaff
(rice husk, compost; manufacture of cultivation **soil** from dewatered sludge cake of inorg. wastewater, **soil** amendments, and optionally **fertilizers**)
- IT Polymers, biological studies
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(water-soluble; manufacture of cultivation **soil** from dewatered sludge cake of inorg. wastewater, **soil** amendments, and optionally **fertilizers**)
- IT 9004-32-4, Carboxymethyl cellulose
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(1400LC; manufacture of cultivation **soil** from dewatered sludge cake of inorg. wastewater, **soil** amendments, and optionally **fertilizers**)
- IT 25085-02-3, Acrylamide-sodium acrylate copolymer
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(A 140; manufacture of cultivation **soil** from dewatered sludge cake of inorg. wastewater, **soil** amendments, and optionally **fertilizers**)
- IT 9000-30-0, Guar gum 9004-34-6D, Cellulose, derivs., biological studies
9005-25-8, Starch, biological studies 9005-32-7, Alginic acid
9005-38-3, Sodium alginate
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(manufacture of cultivation **soil** from dewatered sludge cake of inorg. wastewater, **soil** amendments, and optionally **fertilizers**)
- IT 1305-78-8, Calcium oxide, biological studies
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(solidifying agent; manufacture of cultivation **soil** from dewatered sludge cake of inorg. wastewater, **soil** amendments, and optionally **fertilizers**)

IT 25085-02-3, Acrylamide-sodium acrylate copolymer
 RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
 (A 140; manufacture of cultivation **soil** from dewatered sludge cake
 of inorg. wastewater, **soil** amendments, and optionally
fertilizers)
 RN 25085-02-3 HCAPLUS
 CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX
 NAME)
 CM 1
 CRN 7446-81-3
 CMF C3 H4 O2 . Na



● Na

CM 2
 CRN 79-06-1
 CMF C3 H5 N O



L37 ANSWER 6 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1999:626295 HCAPLUS
 DN 131:256920
 ED Entered STN: 01 Oct 1999
 TI Method for increasing the pH of acidic **soils**
 IN Huttermann, Aloys; Zomorodi, Moitoba
 PA Stockhausen GmbH & Co. KG, Germany
 SO PCT Int. Appl., 22 pp.
 CODEN: PIXXD2
 DT Patent
 LA German
 IC ICM C09K017-16
 ICS C09K017-22
 CC 19-6 (**Fertilizers, Soils, and Plant Nutrition**)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9948998	A1	19990930	WO 1999-EP2009	19990324 <--
	W: US				
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
	EP 1068279	A1	20010117	EP 1999-915700	19990324 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	US 6484441	B1	20021126	US 2000-647107	20001211 <--
PRAI	DE 1998-19813423	A	19980326	<--	

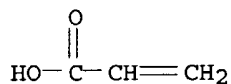
WO 1999-EP2009 W 19990324 <--
 AB The invention relates to a method for increasing the pH of acidic
 soils in which acidic soils are treated with
 cross-linked polyacrylates or polymethacrylates, such as Stockosorb K 400.
 ST acid soil amendment pH increase
 IT Soil acidity
 (increasing the pH of acidic soils)
 IT Soil amendments
 (increasing the pH of acidic soils by)
 IT Acrylic polymers, biological studies
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (increasing the pH of acidic soils by)
 IT 244757-88-8, Stockosorb K 400 244758-16-5, Stockosorb K 410
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (increasing the pH of acidic soils)
 IT 9003-04-7D, Sodium polyacrylate, crosslinked 59326-44-2D,
 Acrylamide-acrylic acid polymer potassium salt, crosslinked 209680-35-3,
 Favor SXM 75
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (increasing the pH of acidic soils by)
 RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
 RE
 (1) Foster Fernandes, P; GB 2216512 A 1989
 (2) Unilever; EP 0072213 A 1983 HCAPLUS
 (3) Unilever; EP 0072214 A 1983 HCAPLUS
 (4) Union Carbide Corp; GB 1376091 A 1974 HCAPLUS
 IT 59326-44-2D, Acrylamide-acrylic acid polymer potassium salt,
 crosslinked
 RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
 (increasing the pH of acidic soils by)
 RN 59326-44-2 HCAPLUS
 CN 2-Propenoic acid, polymer with 2-propenamide, potassium salt (9CI) (CA
 INDEX NAME)

CM 1

CRN 9003-06-9
 CMF (C3 H5 N O . C3 H4 O2)x
 CCI PMS

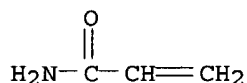
CM 2

CRN 79-10-7
 CMF C3 H4 O2



CM 3

CRN 79-06-1
 CMF C3 H5 N O



L37 ANSWER 7 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1999:282179 HCAPLUS
 DN 130:311264
 ED Entered STN: 07 May 1999
 TI Compositions for cultivating **soil** with reduced **fertility**
 IN Barbary, Salah
 PA Fr.
 SO PCT Int. Appl., 193 pp.
 CODEN: PIXXD2
 DT Patent
 LA French
 IC ICM C05F011-00
 ICS C05G003-00; A01G009-10; C05F005-00
 CC 19-2 (**Fertilizers, Soils, and Plant Nutrition**)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9920581	A1	19990429	WO 1998-FR2012	19980921 <--
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	FR 2769855	A1	19990423	FR 1997-13029	19971017 <--
	FR 2769855	B1	20010622		
	AU 9891709	A1	19990510	AU 1998-91709	19980921 <--
PRAI	FR 1997-13029	A	19971017 <--		
	WO 1998-FR2012	W	19980921 <--		
AB	The invention concerns a composition in particular for stimulating germination, sprouting and growth in soil with reduced fertility , comprising at least one hydrophilic substance optionally containing a limited amount of water. It also comprises at least any one of the following elements alone or in combination: nutrients; soil -improving products; parasiticides; hormones stimulating root growth capacity; products adjusting soil salinity; herbicides; growth-regulating products; disease-curing products; odorizing products; fertilizers with slow diffusion; antifrost products; products for activating sap flow; products comprising bacteria for treating water, soil , wastes and/or the like; and fire-proofing products. The hydrophilic substance is capable of trapping at least one of the above products and of reducing their filtering into the soil or evaporation into the air. The hydrophobic substance is Na acrylate, an acrylic copolymer. textile or paper wastes, etc.				
ST	soil substitute hydrophobic material				
IT	Solid wastes				
	Solid wastes				
	(cotton, paper and textile; hydrophobic substance in compns. for cultivating soil with reduced fertility)				
IT	Sawdust				
	Soil substitutes				
	Sponge (Porifera)				
	Sponges (artificial)				
	(hydrophobic substance in compns. for cultivating soil with reduced fertility)				
IT	Glass beads				
	Zeolites (synthetic), biological studies				
	RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)				
	(hydrophobic substance in compns. for cultivating soil with reduced fertility)				

IT Corn
(processed wastes; hydrophobic substance in compns. for cultivating
soil with reduced fertility)

IT Cotton fibers
Cotton fibers
(waste, paper and textile; hydrophobic substance in compns. for
cultivating **soil with reduced fertility**)

IT Paraffin waxes, biological studies
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(water-retaining products; hydrophobic substance in compns. for
cultivating **soil with reduced fertility**)

IT 7446-81-3, Sodium acrylate 25085-02-3, Sodium
acrylate-acrylamide polymer 25608-12-2, Potassium polyacrylate
37218-13-6 193561-58-9 223508-35-8, PR 9010S
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(hydrophobic substance in compns. for cultivating **soil with
reduced fertility**)

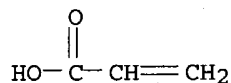
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Barbary, S; WO 9111410 A 1991 HCAPLUS
(2) Cleeve, R; GB 2237012 A 1991
(3) Du Pont; WO 9219095 A 1992
(4) Sarl, B; FR 2726265 A 1996

IT 25085-02-3, Sodium acrylate-acrylamide polymer
RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
(hydrophobic substance in compns. for cultivating **soil with
reduced fertility**)

RN 25085-02-3 HCAPLUS
CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX
NAME)

CM 1

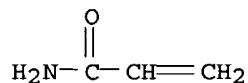
CRN 7446-81-3
CMF C3 H4 O2 . Na



● Na

CM 2

CRN 79-06-1
CMF C3 H5 N O



L37 ANSWER 8 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1999:205222 HCAPLUS
DN 130:237039
ED Entered STN: 01 Apr 1999

TI Environmental cleanup using superabsorbent polymers and
contaminant-reducing agents.

IN Levy, Richard

PA Lee County Mosquito Control District, USA

SO U.S., 16 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM A01N025-00

NCL 424405000

CC 19-9 (Fertilizers, Soils, and Plant Nutrition)

Section cross-reference(s): 61

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5885602	A	19990323	US 1997-863409	19970527 <--
PRAI	US 1997-863409		19970527 <--		

AB The invention provides contaminant-reducing agent delivery compns. that are useful for the control of organic or inorg. contaminants in aquatic or terrestrial environments. The compns. comprise one or more superabsorbent solid organic polymers and at least one contaminant-reducing agent. These superabsorbent polymers act as the primary carriers of one or more contaminant-reducing agents effective for the control of organic or inorg. contaminants in aquatic or terrestrial environments. Contaminant-reducing agents include film-forming agents, microbial agents, nutrient agents, and mixts. thereof. The invention also provides a method to entrap and accumulate organic and inorg. contaminants in one or more superabsorbent polymer compns. containing no contaminant-reducing agent. The invention also provides a method to entrap water in superabsorbent polymers to activate natural and applied microbial and nutrient contaminant-reducing agents in terrestrial environments. Thus, soil bioremediation was carried out with a blend of WATERLOCKA-140 superabsorbent polymer, diesel-fuel-degrading bacteria and BI-CHEM Accelerator II nutrient.

ST environmental cleanup superabsorbent polymer contaminant reducing agent

IT Soil reclamation

Soil reclamation

(biol.; environmental cleanup using superabsorbent polymers and
contaminant-reducing agents)

IT Water pollution

(control; environmental cleanup using superabsorbent polymers and
contaminant-reducing agents)

IT Bacteria (Eubacteria)

(hydrocarbon-degrading; environmental cleanup using superabsorbent
polymers and contaminant-reducing agents)

IT Polymers, uses

RL: NUU (Other use, unclassified); USES (Uses)

(superabsorbent; environmental cleanup using superabsorbent polymers
and contaminant-reducing agents)

IT 97-95-0 1338-43-8, Sorbitan monooleate 25085-02-3, Alcosorb

AB3C 33882-67-6, Aquasorb PR-3005 107709-25-1, Sanwet IM 1500LP

150523-07-2, Super sorb 186270-48-4, WATERLOCKA-140 221191-39-5, Dow

XU 40346.00 221194-24-7, Aridall 11250

RL: NUU (Other use, unclassified); USES (Uses)

(environmental cleanup using superabsorbent polymers and
contaminant-reducing agents)

IT 25608-12-2, Potassium polyacrylate

RL: NUU (Other use, unclassified); USES (Uses)

(lightly crosslinked; environmental cleanup using superabsorbent
polymers and contaminant-reducing agents)

RE.CNT 48 THERE ARE 48 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

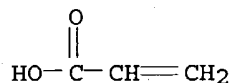
(1) 1994 Annual Book Of Astm Standards; Section 11- Water and Environmental
Technology P1544

- (2) Alcosorb-Water-Retention Aid For Soil Growing Media; Allied Colloids
 - (3) Alexander; US 4677174 1987 HCAPLUS
 - (4) American Petroleum Institute; Health and Environmental Research Publications 1994
 - (5) American Petroleum Institute Spills Technology Issue Group; The Role of Chemical Dispersants in Oil Spill Control 1986
 - (6) Anderson; US 5317834 1994
 - (7) Anon; WO 8808821 1988
 - (8) Anon; Bio-Systems Corporation 1994
 - (9) Anon; IM-3500 Toxicity Testing Summary 1988
 - (10) Anon; Information from Stockhausen 1992
 - (11) Anon; Information from Stockhausen 1993
 - (12) Anon; Lab developing suicidal waste-eating microbes 1995
 - (13) Anon; Sea Sweep 1993
 - (14) Anon; SeaSweep-Solutions for oil and chemical spill cleanup on land and water 1993
 - (15) Anon; Stockosorb-Absorbent Polymers 1992
 - (16) Atlas, R; Chemical and Engineering News 1995, P32 HCAPLUS
 - (17) Bok; US 5273749 1993
 - (18) Borchardt, J; Today's Chemist at Work 1995, V4, P47
 - (19) Brannon-Peppas, L; Studies in Polymer Science 8 1990
 - (20) Chris Craft Industrial Products Inc; MonoSol
 - (21) Cuiti; US 3676357 1972 HCAPLUS
 - (22) Diamond; US 5492881 1996 HCAPLUS
 - (23) Fanta; US 4134863 1979 HCAPLUS
 - (24) Florida Department Of Environmental Protection Division Of Waste Management; Guidelines for Assessment and Remediation of Petroleum Contaminated Soil 1994
 - (25) Fredric, L; ACS Symposium Series 573 1994
 - (26) Garrett, W; NRL Memorandum Report 2451 1992
 - (27) Garrett, W; Proceedings from Joint Conference on Prevention and Control of Oil Spills 1969, P257
 - (28) Groundwater Technology Inc; Bioremediation Services" 1994
 - (29) Gutnick; US 4230801 1980 HCAPLUS
 - (30) Gutnick; US 4276094 1981
 - (31) John, E; "Handbook of Bioremediation 1994
 - (32) Levy; US 4818534 1989 HCAPLUS
 - (33) Levy; US 4983389 1991 HCAPLUS
 - (34) Levy; US 4983390 1991 HCAPLUS
 - (35) Masuda; US 4076663 1978
 - (36) Mikita; US 4552938 1985 HCAPLUS
 - (37) Mikita; US 4703067 1987 HCAPLUS
 - (38) Miyazaki; US 4389513 1983 HCAPLUS
 - (39) Robert, E; "Hydrocarbon Bioremediation 1994
 - (40) Rolf; US 5142817 1992
 - (41) Sanwet Superabsorbent Products; Hoechst Celanese-Superabsorbent Materials 1987
 - (42) Sea Sweep Inc; Sea Sweep brochure 1993
 - (43) Stockhausen Inc; "Culigel 1994
 - (44) Sybron Chemicals Inc; Bioremediation Statement of Qualifications 1995
 - (45) T H E Laboratories Inc; Acute Biomonitoring Results for Sea Sweep Inc's Oil Spill Absorbent Product 1991
 - (46) Takeda; US 4525527 1985 HCAPLUS
 - (47) Takeda; US 4612250 1986 HCAPLUS
 - (48) Takeda; US 4618631 1986 HCAPLUS
- IT 25085-02-3, Alcosorb AB3C
 RL: NUU (Other use, unclassified); USES (Uses)
 (environmental cleanup using superabsorbent polymers and
 contaminant-reducing agents)
- RN 25085-02-3 HCAPLUS
- CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 7446-81-3

CMF C3 H4 O2 . Na

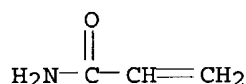


● Na

CM 2

CRN 79-06-1

CMF C3 H5 N O



L37 ANSWER 9 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1999:78425 HCAPLUS

DN 130:138821

ED Entered STN: 05 Feb 1999

TI Soil amendment **fertilizers** containing water-soluble copolymers and minerals

IN Endo, Ryuichi; Masago, Tomoyuki

PA Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C05G003-00

ICS C05D001-00; C05F005-00; C05F007-00; C05G001-00; C09K017-48;

C09K101-00

CC 19-5 (**Fertilizers, Soils, and Plant Nutrition**)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11029387	A2	19990202	JP 1997-197929	19970708 <--
PRAI	JP 1997-197929		19970708	<--	

AB The **fertilizers**, which show long-lasting **fertilizing** effect on infertile **soil**, comprise water-sol copolymers and mineral components contained therein. A liquid **fertilizer** containing acrylamide-K acrylate copolymer, N, PO₄, and K was applied to desert **soil** increased yields of wheat and corn. Toxicity of the **fertilizer** on carp was very low.

ST water sol copolymer mineral **soil** amendment; **fertilizer** water sol copolymer mineral; acrylamide potassium acrylate copolymer mineral **fertilizer**

IT **Fertilizers**

RL: AGR (Agricultural use); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(nitrogen-phosphorus-potassium; sustained-release **soil**)

amendment **fertilizers** containing water-soluble copolymers and minerals)

IT **Soil amendments**
 (sustained-release **soil amendment fertilizers**
 containing water-soluble copolymers and minerals)

IT Mineral elements, biological studies
 RL: **AGR (Agricultural use)**; BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
 (sustained-release **soil amendment fertilizers**
 containing water-soluble copolymers and minerals)

IT **Fertilizers**
 RL: ADV (Adverse effect, including toxicity); **AGR (Agricultural use)**; BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
 (sustained-release; sustained-release **soil amendment fertilizers** containing water-soluble copolymers and minerals)

IT Polymers, biological studies
 RL: ADV (Adverse effect, including toxicity); **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
 (water-soluble; sustained-release **soil amendment fertilizers** containing water-soluble copolymers and minerals)

IT **31212-13-2, Acrylamide-potassium acrylate copolymer**
 RL: ADV (Adverse effect, including toxicity); **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
 (sustained-release **soil amendment fertilizers** containing water-soluble copolymers and minerals)

IT **31212-13-2, Acrylamide-potassium acrylate copolymer**
 RL: ADV (Adverse effect, including toxicity); **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
 (sustained-release **soil amendment fertilizers** containing water-soluble copolymers and minerals)

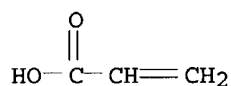
RN **31212-13-2 HCAPLUS**

CN **2-Propenoic acid, potassium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)**

CM 1

CRN 10192-85-5

CMF C3 H4 O2 . K

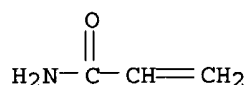


● K

CM 2

CRN 79-06-1

CMF C3 H5 N O



L37 ANSWER 10 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1998:219838 HCAPLUS
 DN 128:244756
 ED Entered STN: 18 Apr 1998
 TI Anionic water-soluble polymer precipitation in salt solution
 IN Mallon, Joseph J.; Farinato, Raymond S.; Rosati, Louis; Freeman, John J., Jr.
 PA Cytec Technology Corp., USA
 SO PCT Int. Appl., 29 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C08F002-10
 ICS C08J003-03; C08L101-14
 CC 37-3 (Plastics Manufacture and Processing)
 Section cross-reference(s): 19, 60

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9814483	A1	19980409	WO 1997-US16463	19970917 <--
	W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, RO, RU, SD, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	US 5725779	A	19980310	US 1996-723628	19961003 <--
	US 5779396	A	19980714	US 1996-726158	19961003 <--
	US 5889097	A	19990330	US 1996-726157	19961003 <--
	AU 9744203	A1	19980424	AU 1997-44203	19970917 <--
	AU 728841	B2	20010118		
	EP 929580	A1	19990721	EP 1997-942523	19970917 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
	BR 9712183	A	19990831	BR 1997-12183	19970917 <--
	JP 2001501250	T2	20010130	JP 1998-516576	19970917 <--
	ZA 9708844	A	19980417	ZA 1997-8844	19971002 <--
	US 6040376	A	20000321	US 1998-187566	19981105 <--
	NO 9901543	A	19990531	NO 1999-1543	19990330 <--
PRAI	US 1996-723628	A	19961003	<--	
	US 1996-726157	A	19961003	<--	
	US 1996-726158	A	19961003	<--	
	WO 1997-US16463	W	19970917	<--	
AB	Aqueous compns. of precipitated anionic polymers in solns. for applications in papermaking, mining, wastewater treatment, and soil conditioning, are manufactured by mixing, in any order, water, ≥ 1 anionic water-soluble polymer, an effective amount of ≥ 1 kosmotropic salts and ≥ 1 cationic organic salt.				
ST	kosmotropic salt anionic water soluble polymer; acrylamido methylpropanesulfonate copolymer salt soln pptn; tetraammonium halide salt water soluble polymer				
IT	Quaternary ammonium compounds, uses				
	RL: MOA (Modifier or additive use); USES (Uses)				
	(anionic water-soluble polymer precipitation in salt solution and applications)				
IT	Soil amendments				
	(anionic water-soluble polymer precipitation in salt solution for soil conditioning)				
IT	Polymers, properties				
	RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or				

engineered material use); USES (Uses)
(water-soluble; anionic water-soluble polymer precipitation in salt solution and applications)

IT 56-37-1, Benzyltriethylammonium chloride 123-03-5 7783-20-2, Ammonium sulfate, uses

RL: MOA (Modifier or additive use); USES (Uses)

(anionic water-soluble polymer precipitation in salt solution and applications)

IT 9003-06-9, Acrylamide-acrylic acid copolymer **40623-73-2**, Acrylamide-2-acrylamido-2-methylpropanesulfonic acid copolymer

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(anionic water-soluble polymer precipitation in salt solution and applications)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Hymo Corp; EP 0717056 A 1996 HCAPLUS

(2) Kyoritsu Yuki Co Ltd; EP 0183466 A 1986 HCAPLUS

(3) Truetech Inc; WO 9632194 A 1996 HCAPLUS

IT **40623-73-2**, Acrylamide-2-acrylamido-2-methylpropanesulfonic acid copolymer

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(anionic water-soluble polymer precipitation in salt solution and applications)

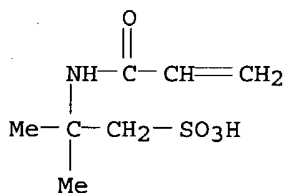
RN 40623-73-2 HCAPLUS

CN 1-Propanesulfonic acid, 2-methyl-2-[(1-oxo-2-propenyl)amino]-, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 15214-89-8

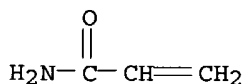
CMF C7 H13 N O4 S



CM 2

CRN 79-06-1

CMF C3 H5 N O



L37 ANSWER 11 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1997:248003 HCAPLUS

DN 126:224722

ED Entered STN: 17 Apr 1997

TI Sustained release of **agrochemicals** by way of irrigation water

IN **Rose, Simon Alexander Hanson; Chamberlain, Peter**
 PA Allied Colloids Limited, UK; Rose, Simon Alexander Hanson; Chamberlain, Peter
 SO PCT Int. Appl., 27 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A01N025-08
 ICS C05D009-02; C05G003-00; C05G003-02
 CC 19-6 (**Fertilizers, Soils, and Plant Nutrition**)
 Section cross-reference(s): 5

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9707675	A1	19970306	WO 1996-GB2074	19960823
	W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM				
	CA 2227926	AA	19970306	CA 1996-2227926	19960823
	AU 9668289	A1	19970319	AU 1996-68289	19960823
	AU 707743	B2	19990715		
	EP 852462	A1	19980715	EP 1996-928562	19960823
	R: ES, FR, GR, IT, PT				
	ZA 9607288	A	19970828	ZA 1996-7288	19960828
PRAI	GB 1995-17708	A	19950831		
	WO 1996-GB2074	W	19960823		
AB	Sustained release of an agrochem. , selected from trace elements, chelates and pesticides, is achieved by contacting irrigation water with a solid matrix of water-soluble wax through which the active ingredient is dispersed and which also includes an erosion-inhibiting amount of water-soluble gel blocking synthetic polymer particles.				
ST	sustained release agrochem irrigation water				
IT	Trace elements, biological studies				
	RL: AGR (Agricultural use) ; BIOL (Biological study); USES (Uses) (chelates; polymer matrix for sustained release of agrochems. by way of irrigation water)				
IT	Agrochemical formulations				
	Irrigation waters				
	(polymer matrix for sustained release of agrochems. by way of irrigation water)				
IT	Waxes				
	RL: MOA (Modifier or additive use); USES (Uses) (polymer matrix for sustained release of agrochems. by way of irrigation water)				
IT	Chelates				
	RL: AGR (Agricultural use) ; BIOL (Biological study); USES (Uses) (trace element; polymer matrix for sustained release of agrochems. by way of irrigation water)				
IT	25322-68-3, Peg 4000 38193-60-1, Acrylamide-sodium 2-acrylamido-2-methylpropanesulfonate polymer				
	RL: MOA (Modifier or additive use); USES (Uses) (polymer matrix for sustained release of agrochems. by way of irrigation water)				
IT	25085-02-3, Acrylamide-sodium acrylate polymer				
	RL: MOA (Modifier or additive use); USES (Uses) (reversed-phase bead; polymer matrix for sustained release of agrochems. by way of irrigation water)				
IT	16455-61-1, Libfer SP				
	RL: AGR (Agricultural use) ; BIOL (Biological study); USES (Uses)				

(sustained release of **agrochems.** by way of irrigation water)

IT 38193-60-1, Acrylamide-sodium 2-acrylamido-2-methylpropanesulfonate polymer

RL: MOA (Modifier or additive use); USES (Uses)

(polymer matrix for sustained release of **agrochems.** by way of irrigation water)

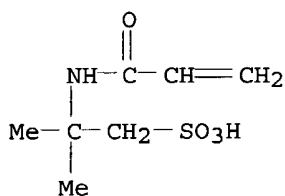
RN 38193-60-1 HCAPLUS

CN 1-Propanesulfonic acid, 2-methyl-2-[(1-oxo-2-propenyl)amino]-, monosodium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 5165-97-9

CMF C7 H13 N O4 S . Na

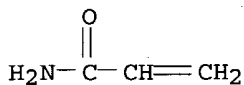


● Na

CM 2

CRN 79-06-1

CMF C3 H5 N O



IT 25085-02-3, Acrylamide-sodium acrylate polymer

RL: MOA (Modifier or additive use); USES (Uses)

(reversed-phase bead; polymer matrix for sustained release of **agrochems.** by way of irrigation water)

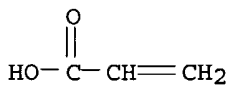
RN 25085-02-3 HCAPLUS

CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 7446-81-3

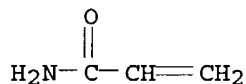
CMF C3 H4 O2 . Na



● Na

CM 2

CRN 79-06-1
CMF C3 H5 N O

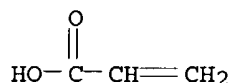


L37 ANSWER 12 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1996:231978 HCAPLUS
DN 124:259791
ED Entered STN: 20 Apr 1996
TI **Soil** modification for **agricultural** uses
IN Mori, Kenji
PA Mitsubishi Chemical Corp., Japan
SO Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM C09K017-42
ICS A01G001-00; C09K017-06; C09K017-48
ICI C09K101-00
CC 19-8 (**Fertilizers, Soils, and Plant Nutrition**)
Section cross-reference(s): 58
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08041460	A2	19960213	JP 1994-196256	19940729 <--
PRAI	JP 1994-196256		19940729 <--		
AB	Water-containing soil is mixed with water-soluble polymer, granulated, and treated with lime to give a regenerated soil for horticultural use. The polymer is selected from a copolymer comprising (meth)acrylic acid or its salt and (meth)acrylamide.				
ST	methacrylic acid methacrylamide copolymer; acrylic acid acrylamide copolymer; soil modification copolymer horticulture				
IT	Lime (chemical) RL: TEM (Technical or engineered material use); USES (Uses) (in soil modification for agricultural uses)				
IT	Horticulture (soil modification for agricultural uses)				
IT	25085-02-3, Acrylamide-sodium acrylate copolymer RL: TEM (Technical or engineered material use); USES (Uses) (in soil modification for agricultural uses)				
IT	25085-02-3, Acrylamide-sodium acrylate copolymer RL: TEM (Technical or engineered material use); USES (Uses) (in soil modification for agricultural uses)				
RN	25085-02-3 HCAPLUS				
CN	2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)				

CM 1

CRN 7446-81-3
CMF C3 H4 O2 . Na

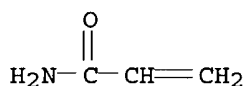


● Na

CM 2

CRN 79-06-1

CMF C3 H5 N O



L37 ANSWER 13 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1995:652547 HCAPLUS

DN 123:32201

ED Entered STN: 04 Jul 1995

TI Culture soils for growth of seedlings

IN Hasegawa, Akira; Niide, Yojiro; Okada, Seiichi; Mori, Toshio

PA Sumitomo Chemical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 3 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM A01G001-00

ICS C09K017-42; C09K017-48

ICI C09K101-00

CC 19-6 (Fertilizers, Soils, and Plant Nutrition)

FAN.CNT 1

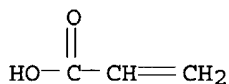
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07099833	A2	19950418	JP 1993-245507	19930930 <--
PRAI	JP 1993-245507		19930930 <--		
AB	The culturing soil is hardened by adding to it (1) acrylamide-acrylic acid copolymers, (2) aluminum salts (e.g., aluminum sulfate, aluminum potassium sulfate), (3) polyvalent metallic salts (e.g., ferric sulfate, ferric chloride). The culture soil is hard and does not readily crumble at the time of transplanting of seedlings.				
ST	plant seedling culture soil metal salt				
IT	Seedling Soils (culture soils for growth of seedlings)				
IT	7429-90-5D, Aluminum, salts 7439-89-6D, Iron, salts 7705-08-0, Ferric chloride, biological studies 9003-06-9, Acrylamide-acrylic acid copolymer 10028-22-5, Ferric sulfate 10043-01-3, Aluminum sulfate 10043-67-1, Aluminum potassium sulfate 25085-02-3, Acrylamide-sodium acrylate copolymer				
	RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses) (in culture soils for growth of seedlings)				
IT	25085-02-3, Acrylamide-sodium acrylate copolymer				
	RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses) (in culture soils for growth of seedlings)				
RN	25085-02-3 HCAPLUS				

CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 7446-81-3

CMF C3 H4 O2 . Na

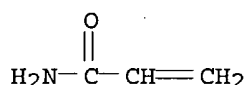


● Na

CM 2

CRN 79-06-1

CMF C3 H5 N O



L37 ANSWER 14 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1994:297523 HCAPLUS

DN 120:297523

ED Entered STN: 11 Jun 1994

TI Polyacrylamide soil modifiers enhanced with nutrients.

IN Miller, Edward Elliott

PA American Cyanamid Co., USA

SO Eur. Pat. Appl., 14 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C09K017-00

ICS C05G003-00

CC 19-6 (Fertilizers, Soils, and Plant Nutrition)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 586911	A1	19940316	EP 1993-112865	19930811 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	CA 2105831	AA	19940312	CA 1993-2105831	19930909 <--
	AU 9347304	A1	19940317	AU 1993-47304	19930910 <--
PRAI	US 1992-943643		19920911	<--	

AB The title composition, usable for profile-modifying and revegetating permeable soils, comprises a water-soluble polymer, a redox couple made of a water-soluble Fe(II) salt and an oxidizing agent, and agricultural nutrient. The composition is mixed with water and applied to a subterranean or soil-surface formation, wherein Fe²⁺ is oxidized to Fe³⁺, to gel the polymer, making the subterranean or soil surface formation impermeable. A composition was made of poly(acrylamide-acrylic acid) (90:10) 25, water 15, 10 % Fe(NH₄)₂(SO₄)₂ 5, 10 % NaClO₃ 5, and Nitroform 50 g.

ST polyacrylamide soil stabilizer nutrient

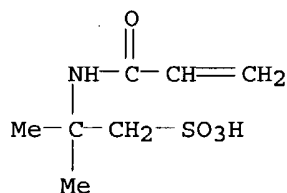
IT Acrylic polymers, uses

- RL: USES (Uses)
(soil stabilizer containing, agricultural)
- IT Soil stabilization
(agents, acrylic polymers-containing compns., nutrient-enhanced)
- IT 7722-84-1, Hydrogen peroxide, uses 7727-54-0, Ammonium persulfate
7775-09-9, Sodium chlorate 7789-38-0, Sodium bromate
RL: USES (Uses)
(soil stabilizer containing acrylic polymer and ferrous salt and,
agricultural)
- IT 6484-52-2, Ammonium nitrate, uses 7697-37-2D, Nitric acid, salts with
alkali metals 7727-21-1, Potassium persulfate 7758-94-3, Ferrous
chloride 7775-27-1, Sodium persulfate 7782-68-5D, Iodic acid, salts
with alkali metals 7782-77-6D, Nitrous acid, salts with alkali metals
7789-31-3D, Bromic acid, salts with alkali metals 7790-92-3D,
Hypochlorous acid, salts with alkali metals 7790-93-4D, Chloric acid,
salts with alkali metals 10045-89-3, Ferrous ammonium sulfate
RL: USES (Uses)
(soil stabilizer containing acrylic polymer and,
agricultural)
- IT 9003-06-9, Poly(acrylamide-acrylic acid) 144503-03-7
RL: USES (Uses)
(soil stabilizer containing, agricultural)
- IT 144503-03-7
RL: USES (Uses)
(soil stabilizer containing, agricultural)
- RN 144503-03-7 HCAPLUS
- CN 2-Propenoic acid, sodium salt, polymer with 2-methyl-2-[(1-oxo-2-
propenyl)amino]-1-propanesulfonic acid (9CI) (CA INDEX NAME)

CM 1

CRN 15214-89-8

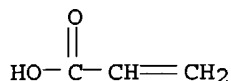
CMF C7 H13 N O4 S



CM 2

CRN 7446-81-3

CMF C3 H4 O2 . Na



● Na

DN 118:6224
 ED Entered STN: 10 Jan 1993
 TI Grain sorghum response to granular formulations of iron sources and hydrophilic polymers
 AU Mortvedt, J. J.; Mikkelsen, R. L.; Behel, A. D., Jr.
 CS Nalt. Fert. Environ. Res. Cent., Tennessee Valley Author., Muscle Shoals, AL, 35660, USA
 SO Journal of Plant Nutrition (1992), 15(10), 1913-26
 CODEN: JPNUDS; ISSN: 0190-4167
 DT Journal
 LA English
 CC 19-5 (Fertilizers, Soils, and Plant Nutrition)
 AB Banded hydrogels containing FeSO₄ provide available Fe for plants on calcareous, Fe-deficient **soils**. Because granular mixts. of gel-forming polymers and Fe sources would be easier to apply to **soil** than hydrogels, several such granular products were compared with banded hydrogels in greenhouse pot expts. Several FeSO₄ + gel-forming polymer (polyacrylamide) formulations were granulated in a rotary tableting press and band applied to an Fe-deficient Epping silt loam **soil** (Ustic Torriorthent). None of the granular formulations of FeSO₄ + polymers banded alone or with other additives (urea, ammonium sulfate, or bentonite clay) was effective in providing available Fe to grain sorghum (Sorghum bicolor). However, a granular formulation of FeEDTA + polymer increased sorghum dry matter yields and Fe uptake. Banded hydrated polymer formulations containing either FeEDTA or FeSO₄ also were effective in providing available Fe to sorghum. Results of an associated laboratory experiment showed that some gel formation occurred
 at granule sites of the FeSO₄ + polymer formulations within 1 wk after **soil** application. Apparently, gel formation was inadequate to affect Fe reactions with the **soil** to form unavailable products. Limited gel formation with granular products may have resulted from insufficient free water in **soil**, high solute concns. in the **soil** solution surrounding the granules, or hard granules. Thus, granular products of FeSO₄ with polymers may not be effective for **soil** application unless other polymers, additives, or ratios of polymers, additives, and FeSO₄ can be identified.
 ST iron **fertilizer** polymer formulation sorghum; granule iron polymer formulation **soil**
 IT Bentonite, biological studies
 RL: BIOL (Biological study)
 (fertilizer additive, iron availability from iron-polymer granular formulations in relation to)
 IT Sorghum
 (fertilizer experiment with, with iron-polymer granular formulations)
 IT Polymers, biological studies
 RL: BIOL (Biological study)
 (hydrophilic, iron **fertilizer** granules formulated with, sorghum response to, hydration in **soil** in relation to)
 IT **Fertilizer** experiment
 (with iron-polymer granular formulations, with sorghum)
 IT **Soils**
 (Ustic Torriorthents, iron-polymer **fertilizer** granular formulations gelation and hydration degree in)
 IT **Agrochemical** formulations
 (granules, of iron **fertilizer** with gel-forming polymers, sorghum response to, hydration in **soil** in relation to)
 IT **Fertilizers**
 RL: BIOL (Biological study)
 (iron, granular formulations with polymers, gelation and hydration degree of, in calcareous **soils**)
 IT 7439-89-6, Iron, biological studies

RL: BIOL (Biological study)
 (absorption of, by sorghum **fertilized** with iron-polymer granular formulations)

IT 57-13-6, Urea, properties 7783-20-2, Ammonium sulfate, properties
 RL: PRP (Properties)
 (**fertilizer** additive, iron availability from iron-polymer granular formulations in relation to)

IT 7720-78-7, Ferrous sulfate 17099-81-9
 RL: BIOL (Biological study)
 (**fertilizer** granules with gel-forming polymers, sorghum response to, hydration in **soil** in relation to)

IT 9004-32-4 **31212-13-2** 110942-30-8, Terra-sorb 115003-69-5, Aquastore
 RL: BIOL (Biological study)
 (iron **fertilizer** granules formulated with, sorghum response to, hydration in **soil** in relation to)

IT **31212-13-2**
 RL: BIOL (Biological study)
 (iron **fertilizer** granules formulated with, sorghum response to, hydration in **soil** in relation to)

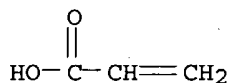
RN **31212-13-2** HCAPLUS

CN 2-Propenoic acid, potassium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 10192-85-5

CMF C3 H4 O2 . K

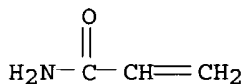


● K

CM 2

CRN 79-06-1

CMF C3 H5 N O



L37 ANSWER 16 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1992:5832 HCAPLUS

DN 116:5832

ED Entered STN: 11 Jan 1992

TI Polymeric hydrogel **soil** substitute

IN Barbary, Salah

PA Fr.

SO PCT Int. Appl., 29 pp.
 CODEN: PIXXD2

DT Patent

LA French

IC ICM C05G003-00
ICS A01C001-06

CC 19-2 (**Fertilizers, Soils, and Plant Nutrition**)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9111410	A1	19910808	WO 1990-FR79	19900201 <--
	W: AU, BB, BG, BR, CA, FI, HU, JP, KP, KR, LK, MC, MG, MW, NO, RO, SD, SU, US				
	RW: AT, BE, BF, BJ, CF, CG, CH, CM, DE, DK, ES, FR, GA, GB, IT, LU, ML, MR, NL, SE, SN, TD, TG				
	AU 9050474	A1	19910821	AU 1990-50474	19900201 <--
PRAI	WO 1990-FR79		19900201 <--		
AB	A soil substitute, which incorporates N-P-K-trace element fertilizers , is made of a polymeric hydrogel, with high water-absorbing capacity. Granular cross-linked Na acrylate gel (7.5 kg) was treated with 2.5 L liquid fertilizer (160 g solids) and dried at 70°. The product was mixed with sandy soil and tested in pot for the culture of ryegrass and trefoil. The composition may also be used for seed coating.				
ST	polymer hydrogel soil substitute				
IT	Seed (coatings for, hydrogel polymers as)				
IT	Aloe (genus) Chamomile (extract, fertilizers containing, in hydrogel soil substitutes)				
IT	Bacteria Cyanobacteria Yeast (fertilizer containing, in hydrogel polymers soil substitutes)				
IT	Lime (chemical) RL: AGR (Agricultural use) ; BIOL (Biological study); USES (Uses) (fertilizer containing, in hydrogel polymers soil substitutes)				
IT	Myrrh RL: AGR (Agricultural use) ; BIOL (Biological study); USES (Uses) (fertilizer containing, in hydrogel soil substitutes)				
IT	Mint (fertilizers containing, in hydrogel soil substitutes)				
IT	Soil substitutes (hydrogel polymers)				
IT	Angelica Ginseng Rhubarb Thistle (root extract, fertilizer containing, in hydrogel soil substitutes)				
IT	Fertilizers RL: OCCU (Occurrence) (nitrogen-phosphorus-potassium-trace element, hydrogel polymer soil substitutes containing)				
IT	7439-89-6, Iron, biological studies 7439-98-7, Molybdenum, biological studies 7440-42-8, Boron, biological studies 7440-50-8, Copper, biological studies 7440-66-6, Zinc, biological studies RL: AGR (Agricultural use) ; BIOL (Biological study); USES (Uses) (fertilizer containing, hydrogel polymer soil substitute containing)				
IT	7704-34-9, Sulfur, biological studies 7761-88-8, Silver nitrate, biological studies RL: AGR (Agricultural use) ; BIOL (Biological study); USES (Uses) (fertilizer containing, in hydrogel polymers soil				

substitutes)

IT 76-22-2, Camphor
 RL: **AGR (Agricultural use)**; BIOL (Biological study); USES (Uses)
 (fertilizer containing, in hydrogel soil substitutes)

IT 9003-05-8, Polyacrylamide 25549-84-2D, Poly(sodium acrylate),
 cross-linked
 RL: OCCU (Occurrence)
 (hydrogel, as soil substitute)

IT 9004-34-6, Cellulose, biological studies 9004-34-6D, Cellulose, polymers
 with acrylic compds. 9005-25-8, Starch, biological studies
 25085-02-3 31212-13-2
 RL: BIOL (Biological study)
 (soil substitute hydrogel containing)

IT 25085-02-3 31212-13-2
 RL: BIOL (Biological study)
 (soil substitute hydrogel containing)

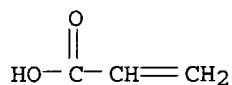
RN 25085-02-3 HCAPLUS

CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX
 NAME)

CM 1

CRN 7446-81-3

CMF C3 H4 O2 . Na

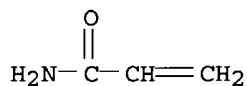


● Na

CM 2

CRN 79-06-1

CMF C3 H5 N O



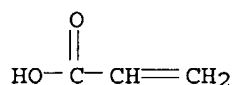
RN 31212-13-2 HCAPLUS

CN 2-Propenoic acid, potassium salt, polymer with 2-propenamide (9CI) (CA
 INDEX NAME)

CM 1

CRN 10192-85-5

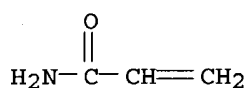
CMF C3 H4 O2 . K



● K

CM 2

CRN 79-06-1
CMF C3 H5 N O



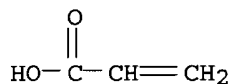
L37 ANSWER 17 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1991:470541 HCAPLUS
DN 115:70541
ED Entered STN: 23 Aug 1991
TI Filler-incorporating hydrogels as **soil** conditioners
IN Tanaka, Koji
PA Japan Exlan Co., Ltd., Japan
SO U.S., 5 pp.
CODEN: USXXAM
DT Patent
LA English
IC ICM C05G003-04
NCL 071027000
CC 19-6 (**Fertilizers, Soils, and Plant Nutrition**)
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5013349	A	19910507	US 1983-524037	19830817 <--
	JP 59062688	A2	19840410	JP 1982-151047	19820830 <--
	JP 63013466	B4	19880325		
PRAI	JP 1982-151047		19820830	<--	

AB A filler is mixed with an aqueous solution of a cross-linkable polymer, followed by crosslinking and hydrogel formation. The powdery or granular **soil** conditioner obtained shows no component separation, such as hydrogel emergence to the surface, when applied. A suspension of 17 parts poly(acrylonitrile-Me acrylate) (90:10) in 83 parts 10% aqueous NaOH solution was stirred at 90°, for 45 min, to give an aqueous solution containing poly(Na acrylate-acrylamide) (70:30), which was neutralized with H2SO4 and treated with 6.7 parts polymer solution. The cross-linkable hydrophilic polymer solution obtained (100 parts) was mixed with 26 parts sand, followed by heating at 180° for 180 min, to give a **soil** conditioner.

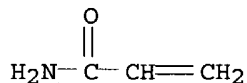
ST hydrogel filler **soil** conditioner
IT **Soil** amendments
(hydrogels, filler-incorporating)
IT Sand
RL: BIOL (Biological study)
(in **soil** conditioner preparation)

IT **Soils**
 (loamy, sandy, in soil conditioner preparation)
 IT 9002-89-5, Poly(vinyl alcohol) 9003-01-4, Poly(acrylic acid)
 9005-25-8, Starch, uses and miscellaneous 25085-02-3
 30396-85-1
 RL: BIOL (Biological study)
 (in soil conditioner preparation)
 IT 7631-86-9
 RL: BIOL (Biological study)
 (sand, in soil conditioner preparation)
 IT 25085-02-3
 RL: BIOL (Biological study)
 (in soil conditioner preparation)
 RN 25085-02-3 HCAPLUS
 CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)
 CM 1
 CRN 7446-81-3
 CMF C3 H4 O2 . Na



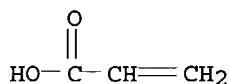
● Na

CM 2
 CRN 79-06-1
 CMF C3 H5 N O



L37 ANSWER 18 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1989:76314 HCAPLUS
 DN 110:76314
 ED Entered STN: 04 Mar 1989
 TI Production of hydrophilic polymers with low residual monomer contents
 IN Irie, Yoshio; Iwasaki, Kaoru; Hatsuda, Takumi; Kimura, Kazumasa; Harada, Nobuyuki; Ishizaki, Kunihiro; Shimomura, Tadao; Fujiwara, Teruaki
 PA Nippon Shokubai Kagaku Kogyo Co., Ltd., Japan
 SO Eur. Pat. Appl., 18 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM C08F006-00
 CC 35-4 (Chemistry of Synthetic High Polymers)
 Section cross-reference(s): 19, 63
 FAN.CNT 1
 PATENT NO. KIND DATE APPLICATION NO. DATE

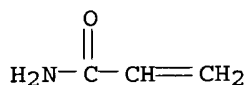
PI EP 289338 A2 19881102 EP 1988-303912 19880429 <--
 EP 289338 A3 19890412
 EP 289338 B1 19911016
 EP 289338 B2 20000322
 R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE
 JP 01026604 A2 19890127 JP 1988-101241 19880426 <--
 JP 2567453 B2 19961225
 US 4920202 A 19900424 US 1988-187866 19880429 <--
 ES 2026653 T3 19920501 ES 1988-303912 19880429 <--
 CA 1314355 A1 19930309 CA 1988-565598 19880429 <--
 CN 88103323 A 19881221 CN 1988-103323 19880430 <--
 CN 1015180 B 19911225
 PRAI JP 1987-104764 19870430 <--
 AB Drying of hydrated polymer gels in gases gas containing H2O (dew point 50-100°) at 80-250° gives the title polymers. Suspension polymerization of 25:75 acrylic acid-Na acrylate at 55-60° and drying the polymer gel in hot, moist air (dew point 80°) at 120° to moisture content <10% gave a polymer with residual monomer content 30 ppm; vs. 250 when dried at 120° with air at dew point 5°.
 ST hydrophilic polymer drying; acrylic acid copolymer drying; sodium acrylate copolymer drying; absorbent polymer drying; fluidized bed drying polymer; monomer residual removal polymer
 IT Adsorbents
 (for water, hydrophilic acrylic polymers, drying of, for low residual monomer content)
 IT Drying
 (of hydrophilic polymers, in moist gases for low residual monomer content)
 IT 9033-79-8P, Acrylic acid-sodium acrylate copolymer 25085-02-3P, Acrylamide-sodium acrylate copolymer 25549-84-2P, Sodium acrylate homopolymer 33882-67-6P 76774-22-6P 81272-94-8P
 RL: PREP (Preparation)
 (absorbents, drying of, for low residual monomer content)
 IT 25085-02-3P, Acrylamide-sodium acrylate copolymer
 RL: PREP (Preparation)
 (absorbents, drying of, for low residual monomer content)
 RN 25085-02-3 HCAPLUS
 CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)
 CM 1
 CRN 7446-81-3
 CMF C3 H4 O2 . Na



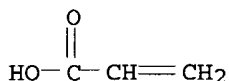
● Na

CM 2

CRN 79-06-1
 CMF C3 H5 N O



L37 ANSWER 19 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1989:56498 HCAPLUS
 DN 110:56498
 ED Entered STN: 17 Feb 1989
 TI Utilization of polyacrylamides in hydroamelioration
 AU Kleps, Cristian; Schintee, Corneliu; Tivadar, Delia; Cernaianu, Emil;
 Matei, Ion
 CS ICITID, Baneasa Giurgiu, Rom.
 SO Hidrotehnica (1988), 33(4), 129-35
 CODEN: HIDTA3; ISSN: 0439-0962
 DT Journal
 LA Romanian
 CC 19-3 (Fertilizers, Soils, and Plant Nutrition)
 Section cross-reference(s): 61
 AB The production and application of polyacrylamide-based agents in
 hydroamelioration in Romania is discussed. Solacril RPC at 50 ppm.
 decreased the friction of liquid flow through pipes and improved the energy
 indexes of water supply. Romacril AGR and Romacril STI improved
 water retention in sandy soil and conditions for
 agricultural production
 ST polyacrylamide hydroameliorant sandy soil
 IT Soil amendments
 (polyacrylamides as, in irrigation)
 IT Irrigation
 (polyacrylamides utilization in)
 IT Soils
 (sandy, amelioration of, with polyacrylamides)
 IT 9003-05-8 25085-02-3, Solacril RPC 30280-72-9, Romacril STI
 RL: BIOL (Biological study)
 (as hydroameliorant)
 IT 25085-02-3, Solacril RPC
 RL: BIOL (Biological study)
 (as hydroameliorant)
 RN 25085-02-3 HCAPLUS
 CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX
 NAME)
 CM 1
 CRN 7446-81-3
 CMF C3 H4 O2 . Na

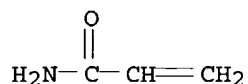


● Na

CM 2

CRN 79-06-1

CMF C3 H5 N O



L37 ANSWER 20 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1987:575064 HCAPLUS
 DN 107:175064
 ED Entered STN: 14 Nov 1987
 TI Soil sealing compositions and methods with 2-acrylamido-2-methylpropanesulfonic acid polymers
 IN Dymond, Brian
 PA Allied Colloids Ltd., UK
 SO U.S., 4 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC ICM C09K017-00
 ICS E02D003-12
 NCL 405264000
 CC 19-2 (Fertilizers, Soils, and Plant Nutrition)
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4669920	A	19870602	US 1986-890751	19860725 <--
	EP 244981	A2	19871111	EP 1987-303519	19870422 <--
	EP 244981	A3	19890510		
	EP 244981	B1	19921007		
	R: BE, DE, ES, FR, GB, IT, NL, SE				
	ES 2052557	T3	19940716	ES 1987-303519	19870422 <--
	CA 1268934	A1	19900515	CA 1987-535546	19870424 <--
	ZA 8703130	A	19880727	ZA 1987-3130	19870430 <--
	AU 8772428	A1	19871105	AU 1987-72428	19870501 <--
	AU 588104	B2	19890907		
PRAI	GB 1986-10762		19860502	<--	

AB A soil-sealing composition, suitable for reducing the permeability of soil to water contaminated with electrolyte, comprises an expanding lattice clay and a water-soluble or water swellable-polymer having a mol. weight >500,000, that is a copolymer of 2-acrylamido-2-methylpropanesulfonic acid, or certain other ethylenically-unsatd. sulfonic acids, together with other ethylenically unsatd. monomers, preferably a blend of acrylamide and acrylic acid. A sealant made of bentonite containing 1% 2-acrylamido-2-methylpropanesulfonic acid-acrylamide copolymer (50:50) (70:30) showed good impermeability in laboratory pressure filtration model expts., using water containing 0.5% CaCl₂.

ST polyacrylate clay soil sealant

IT Acrylic polymers, biological studies
 RL: BIOL (Biological study)
 (soil sealants containing)

IT Clays, biological studies
 RL: BIOL (Biological study)
 (soil sealants containing acrylic polymers and)

IT Soil amendments
 (sealants, expanding lattice clay containing acrylic polymers)

IT 37350-42-8 38193-60-1 53845-65-1
 RL: BIOL (Biological study)
 (soil sealants containing acrylic polymers and)

IT 38193-60-1
 RL: BIOL (Biological study)

(soil sealants containing acrylic polymers and)

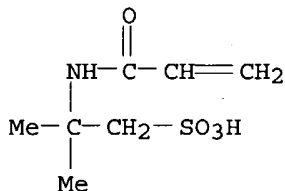
RN 38193-60-1 HCAPLUS

CN 1-Propanesulfonic acid, 2-methyl-2-[(1-oxo-2-propenyl)amino]-, monosodium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 5165-97-9

CMF C7 H13 N O4 S . Na

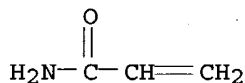


● Na

CM 2

CRN 79-06-1

CMF C3 H5 N O



L37 ANSWER 21 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1984:609949 HCAPLUS

DN 101:209949

TI Acrylamide polymers as soil amendment

PA Sumitomo Chemical Co., Ltd., Japan; Minoru Sangyo K. K.

SO Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC A01G001-00

ICA C09K017-00

CC 19-6 (Fertilizers, Soils, and Plant Nutrition)

FAN.CNT 1

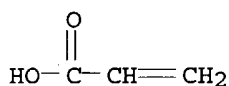
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 59106228	A2	19840619	JP 1982-215955	19821209 <--
	JP 03049525	B4	19910729		
PRAI	JP 1982-215955		19821209 <--		

AB Acrylamide copolymers are soil amendments that hold soil onto roots of salable seedlings and enhance plant growth. Thus, acrylamide-Na acrylate copolymer [25085-02-3] (mol. weight 7,500,000) 200 g and soil 20 kg were mixed to obtain a soil mix for seedlings.

ST acrylamide polymer soil amendment; sodium acrylate acrylamide copolymer soil

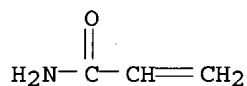
IT Soil amendments

(acrylamide polymers, for seedlings)
 IT 79-06-1D, copolymers 25085-02-3
 RL: BIOL (Biological study)
 (soil amendment, for seedlings)
 IT 25085-02-3
 RL: BIOL (Biological study)
 (soil amendment, for seedlings)
 RN 25085-02-3 HCAPLUS
 CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)
 CM 1
 CRN 7446-81-3
 CMF C3 H4 O2 . Na



● Na

CM 2
 CRN 79-06-1
 CMF C3 H5 N O



L37 ANSWER 22 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1984:19315 HCAPLUS
 DN 100:19315
 ED Entered STN: 12 May 1984
 TI Stable polymer solutions for spray drift control
 IN Bernot, Robert
 PA Nalco Chemical Co. , USA
 SO U.S., 3 pp.
 CODEN: USXXAM
 DT Patent
 LA English
 IC C08K005-05
 NCL 524389000
 CC 5-6 (Agrochemical Bioregulators)
 Section cross-reference(s): 19
 FAN.CNT 1

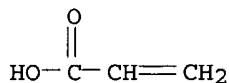
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 4413087	A	19831101	US 1982-410217	19820823 <--
	CA 1204537	A1	19860513	CA 1983-434872	19830818 <--
PRAI	US 1982-410217		19820823		<--
AB	Alc. solns. of acrylamide polymers with mol. weight <1,000,000 are added to agrochem. sprays to provide a coherent spray with a well-defined sheet which can be directed towards a target with a min. loss of solution to				

drift. Thus, a drift control agent was prepared containing acrylamide-Na acrylate copolymer [25085-02-3] (70:30; mol. weight 5,000,000), 3, H₂O 92, Na₂SO₄ 3, and iso-PrOH [67-63-0] 2%. This composition should be aged for 2 wk at ambient temperature or at 120°F.

ST acrylamide polymer drift control **agrochem**
 IT Sprays
 (drift control agents for, acrylamide polymers as)
 IT **Agrochemicals**
 Pesticides
 (sprays, drift control agents for, acrylamide polymers as)
 IT 67-63-0, biological studies
 RL: BIOL (Biological study)
 (**agrochem.** compns. containing acrylamide polymers and, spray
 drift control in relation to)
 IT 79-06-1D, polymers 25085-02-3
 RL: BIOL (Biological study)
 (**agrochem.** compns. containing, for spray drift control)
 IT 25085-02-3
 RL: BIOL (Biological study)
 (**agrochem.** compns. containing, for spray drift control)
 RN 25085-02-3 HCAPLUS
 CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX
 NAME)

 CM 1

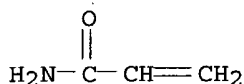
 CRN 7446-81-3
 CMF C3 H4 O2 . Na



● Na

CM 2

 CRN 79-06-1
 CMF C3 H5 N O



L37 ANSWER 23 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1983:574837 HCAPLUS
 DN 99:174837
 ED Entered STN: 12 May 1984
 TI Soil amendment production
 PA Nitto Chemical Industry Co., Ltd., Japan
 SO Jpn. Tokkyo Koho, 6 pp.
 CODEN: JAXXAD
 DT Patent
 LA Japanese
 IC C09K017-00

ICA C05C007-00; C05C009-00

CC 19-6 (Fertilizers, Soils, and Plant Nutrition)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 58028313	B4	19830615	JP 1974-144080	19741217 <--
PRAI	JP 1974-144080		19741217 <--		

AB A granular soil amendment is formulated from acrylamide polymers, silicic acid or silicates and one or more of phosphates, nitrates, and sulfates, or free forms, of urea, guanylurea, guanidine, dicyanidiamide, and amidinothiourea. The product markedly improves aggregation of clayey soil. Thus, a composition containing powdered Na salt of acrylamide-acrylic acid copolymer [25987-30-8] (acrylamide/acrylic acid ratio 85:15, average mol. weight 3,000,000) 7, Na₂CO₃ 0.4, amidinothiourea 5, burnt diatomaceous earth 90, and water 50 parts was granulated. The product had a high aggregation rate for kaolin.

ST amendment fertilizer compn soil

IT Soil amendments

Fertilizers

RL: BIOL (Biological study)

(manufacture of, acrylamide polymers and ureas and thioureas in)

IT 57-13-6, uses and miscellaneous 420-04-2 461-58-5 497-19-8, biological studies 1763-07-1 2114-02-5 17675-60-4

RL: USES (Uses)

(fertilizer-soil amendment containing acrylamide-acrylic acid copolymers and)

IT 25987-30-8

RL: BIOL (Biological study)

(fertilizer-soil amendment containing ureas and thioureas and)

IT 25987-30-8

RL: BIOL (Biological study)

(fertilizer-soil amendment containing ureas and thioureas and)

RN 25987-30-8 HCAPLUS

CN 2-Propenoic acid, polymer with 2-propenamide, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 9003-06-9

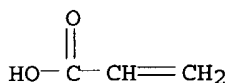
CMF (C3 H5 N O . C3 H4 O2)x

CCI PMS

CM 2

CRN 79-10-7

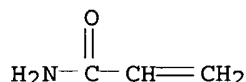
CMF C3 H4 O2



CM 3

CRN 79-06-1

CMF C3 H5 N O



L37 ANSWER 24 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN
 AN 1983:197099 HCAPLUS
 DN 98:197099
 ED Entered STN: 12 May 1984
 TI Polymeric compositions useful as plant growing media additives
 IN Bosley, John Anthony; Dehnel, Roger Brian; Symien, Serge Alfred
 PA Unilever N. V. , Neth.
 SO Eur. Pat. Appl., 21 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC C09K017-00; C05G003-04
 CC 19-6 (Fertilizers, Soils, and Plant Nutrition)
 FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 72214	A1	19830216	EP 1982-304145	19820805 <--
	EP 72214	B1	19861015		
	R: AT, BE, CH, DE, FR, IT, LI, LU, NL, SE				
	ZA 8205595	A	19840328	ZA 1982-5595	19820803 <--
	ZA 8205596	A	19840328	ZA 1982-5596	19820803 <--
	WO 8300498	A1	19830217	WO 1982-GB243	19820805 <--
	W: AU, BR, DK, JP, US				
	WO 8300482	A1	19830217	WO 1982-GB244	19820805 <--
	W: AU, BR, DK, JP, US				
	AU 8287661	A1	19830222	AU 1982-87661	19820805 <--
	AU 547744	B2	19851031		
	AU 8287662	A1	19830222	AU 1982-87662	19820805 <--
	AU 544848	B2	19850613		
	GB 2104532	A	19830309	GB 1982-22581	19820805 <--
	GB 2104532	B2	19850821		
	GB 2109362	A1	19830602	GB 1982-22580	19820805 <--
	GB 2109362	B2	19851002		
	JP 58501233	T2	19830728	JP 1982-502371	19820805 <--
	JP 58501234	T2	19830728	JP 1982-502372	19820805 <--
	IN 156248	A	19850608	IN 1982-CA929	19820805 <--
	IN 156787	A	19851102	IN 1982-CA928	19820805 <--
	AT 22915	E	19861115	AT 1982-304145	19820805 <--
	ES 514804	A1	19830816	ES 1982-514804	19820806 <--
	ES 514805	A1	19830816	ES 1982-514805	19820806 <--
	CA 1215850	A1	19861230	CA 1982-408904	19820806 <--
	CA 1216997	A1	19870120	CA 1982-408905	19820806 <--
	DK 8301546	A	19830407	DK 1983-1546	19830407 <--
	DK 8301547	A	19830407	DK 1983-1547	19830407 <--
PRAI	GB 1981-24256		19810807	<--	
	EP 1982-304145		19820805	<--	
	WO 1982-GB243		19820805	<--	
	WO 1982-GB244		19820805	<--	

AB A polymeric amendment comprising a copolymer of acrylamide and acrylic acid salt (or methacrylate) in a molar ratio 70-95:30-5, cross-linked such that <30% by weight of the dry polymer is water-soluble, has long-term stability

in soil and can absorb releasably ≥ 15 times its weight in water. Thus, acrylic acid (48.7 g) containing benzoin Me ether (0.24 g) was neutralized with K_2CO_3 (47.3 g) as a solution in 120 mL water. Acrylamide (192 g) and methylenebisacrylamide (0.24 g), as a solution in 240 mL water,

were added, and the solution was shielded from light and purged with N for 10 min. The reactant mix was poured into dishes to give a film thickness of .apprx.7.5 mm and irradiated with UV light, peaking at 365 nm, for 5-10 min. The rubbery polymer film obtained was dried and crushed to give a particulate product capable of absorbing 43 times its dry weight of phosphate-containing plant nutrient solution and containing just under 20% by weight

water-soluble material.

ST acrylamide acrylate polymer soil amendment

IT Soil amendments

(acrylamide-acrylic acid salt copolymers as)

IT 79-06-1D, polymers with acrylates and methacrylates 79-10-7D, salts, polymer with acrylamide 79-41-4D, salts, polymer with acrylamide 25085-02-3 31212-13-2

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(as soil amendment)

IT 25085-02-3 31212-13-2

RL: AGR (Agricultural use); BIOL (Biological study); USES (Uses)
(as soil amendment)

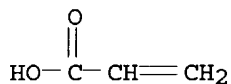
RN 25085-02-3 HCAPLUS

CN 2-Propenoic acid, sodium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 7446-81-3

CMF C3 H4 O2 . Na

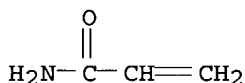


● Na

CM 2

CRN 79-06-1

CMF C3 H5 N O



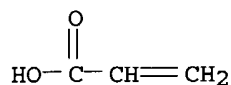
RN 31212-13-2 HCAPLUS

CN 2-Propenoic acid, potassium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 10192-85-5

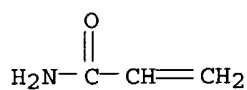
CMF C3 H4 O2 . K



● K

CM 2

CRN 79-06-1
CMF C3 H5 N O



L37 ANSWER 25 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN
AN 1983:178181 HCAPLUS
DN 98:178181
ED Entered STN: 12 May 1984
TI Particulate compositions useful as plant growing media additives
IN Bosley, John Anthony; Dehnel, Roger Brian; Symien, Serge Alfred
PA Unilever N. V. , Neth.
SO Eur. Pat. Appl., 28 pp.
CODEN: EPXXDW
DT Patent
LA English
IC C09K017-00; C05G003-04
CC 19-6 (Fertilizers, Soils, and Plant Nutrition)
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 72213	A1	19830216	EP 1982-304144	19820805 <--
	EP 72213	B1	19850220		
	R: AT, BE, CH, DE, FR, IT, LI, LU, NL, SE				
	ZA 8205595	A	19840328	ZA 1982-5595	19820803 <--
	ZA 8205596	A	19840328	ZA 1982-5596	19820803 <--
	WO 8300498	A1	19830217	WO 1982-GB243	19820805 <--
	W: AU, BR, DK, JP, US				
	WO 8300482	A1	19830217	WO 1982-GB244	19820805 <--
	W: AU, BR, DK, JP, US				
	AU 8287661	A1	19830222	AU 1982-87661	19820805 <--
	AU 547744	B2	19851031		
	AU 8287662	A1	19830222	AU 1982-87662	19820805 <--
	AU 544848	B2	19850613		
	GB 2104532	A	19830309	GB 1982-22581	19820805 <--
	GB 2104532	B2	19850821		
	GB 2109362	A1	19830602	GB 1982-22580	19820805 <--
	GB 2109362	B2	19851002		
	JP 58501233	T2	19830728	JP 1982-502371	19820805 <--
	JP 58501234	T2	19830728	JP 1982-502372	19820805 <--
	AT 11926	E	19850315	AT 1982-304144	19820805 <--
	IN 156248	A	19850608	IN 1982-CA929	19820805 <--
	IN 156787	A	19851102	IN 1982-CA928	19820805 <--
	ES 514804	A1	19830816	ES 1982-514804	19820806 <--
	ES 514805	A1	19830816	ES 1982-514805	19820806 <--

CA 1215850	A1	19861230	CA 1982-408904	19820806 <--
CA 1216997	A1	19870120	CA 1982-408905	19820806 <--
DK 8301546	A	19830407	DK 1983-1546	19830407 <--
DK 8301547	A	19830407	DK 1983-1547	19830407 <--

PRAI GB 1981-24256 19810807 <--
 EP 1982-304144 19820805 <--
 WO 1982-GB243 19820805 <--
 WO 1982-GB244 19820805 <--

AB Water-retentive gel particles containing .apprx.16-80% by weight water and rendered free-flowing by a flow agent (e.g. kaolin, fuller's earth) comprising .apprx.3-20% by weight of the composition was useful as additives for plant-growing media. Thus, K₂CO₃ (195.5 g) in 500 mL water was added to a solution of 1800 g acrylamide in 1950 mL water. Acrylic acid (204 g) containing benzoin Me ether (2 g) and N,N'-methylene-bisacrylamide (1 g) was added to the mixture with stirring, and the solution was shielded from light and purged with N₂. The reactant mix, in a film 5-9 mm thick, was irradiated with UV light for >20 min, cooled, and comminuted with addition of 5% by weight fuller's earth. The product contained 41% moisture and absorbed .apprx.20 times its weight of nutrient solution. When added at 0.5-2.0% weight/volume to 3 sep. growing media (peat, sand, and loam), the gel increased dry weight of bean plant aerial parts as compared with the control without gel.

ST gel particle soil amendment; flow agent polymer soil amendment

IT Compost
 (additives for, water-retentive gel particles containing flow agent as)

IT Bentonite, uses and miscellaneous
 Fuller's earth
 Kaolin, uses and miscellaneous
 RL: USES (Uses)
 (as flow agent, for particulate gel soil amendments)

IT Soil amendments
 (water-retentive gel particles containing flow agent as)

IT Gels
 (water-retentive particles of, containing flow agent, as plant growth media additive)

IT 79-06-1D, polymers with acrylates and methacrylates 79-10-7D, salts, polymers with acrylamide 79-41-4D, salts, polymers with acrylamide
 31212-13-2
 RL: BIOL (Biological study)
 (plant growth media additives comprising flow agent and)

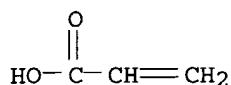
IT 31212-13-2
 RL: BIOL (Biological study)
 (plant growth media additives comprising flow agent and)

RN 31212-13-2 HCAPLUS

CN 2-Propenoic acid, potassium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 10192-85-5
 CMF C3 H4 O2 . K

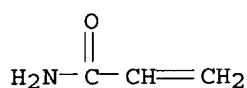


● K

CM 2

CRN 79-06-1

CMF C3 H5 N O



L37 ANSWER 26 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1978:189140 HCAPLUS

DN 88:189140

ED Entered STN: 12 May 1984

TI Soil improvement composition and plant growth agent

IN Eikhof, Robert Harold; King, Paul Arliss

PA Union Carbide Corp., USA

SO Ger. Offen., 106 pp.

CODEN: GWXXBX

DT Patent

LA German

IC A01N007-00

CC 19-3 (Fertilizers, Soils, and Plant Nutrition)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2737941	A1	19780309	DE 1977-2737941	19770823 <--
	DE 2737941	B2	19800410		
	DE 2737941	C3	19801211		
	CA 1134981	A1	19821102	CA 1977-284082	19770804 <--
	BE 858042	A1	19780223	BE 1977-180379	19770823 <--
	NL 7709289	A	19780228	NL 1977-9289	19770823 <--
	FR 2362586	A1	19780324	FR 1977-25728	19770823 <--
	FR 2362586	B1	19840106		
	JP 53038553	A2	19780408	JP 1977-100220	19770823 <--
	JP 61027429	B4	19860625		
	ZA 7705102	A	19780726	ZA 1977-5102	19770823 <--
	GB 1591415	A	19810624	GB 1977-35283	19770823 <--
	IL 52805	A1	19811030	IL 1977-52805	19770823 <--
	AU 7728170	A1	19790301	AU 1977-28170	19770824 <--
	AU 513102	B2	19801113		
	JP 60155288	A2	19850815	JP 1984-212751	19841012 <--
PRAI	US 1976-717398		19760824 <--		

AB A soil conditioner containing a polymeric polyelectrolyte that was made insol. by wetting as a result of solvent sorption and formation of hydrogels was manufactured. Anionic polyelectrolytes associated with cation components (K and(or) NH₄) and cationic polyelectrolytes were associated with NO₃⁻. The polyelectrolyte contained a K acrylate-acrylamide copolymer. The conditioner contained also a wetting agent and its particles were coated with hydrophobic SiO₂ material. The conditioner gel strength was

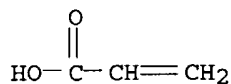
0.021 kg/cm². Plant growth agents were combined with the conditioner-containing **soil** solution at a rate of 32 g growth agent/L **soil** solution; the polyelectrolyte component sorbing stimulators consisted of natural (peat slurry, sawdust, vermiculite, perlite, and(or) sand) and synthetic (organic and inorg. forms, calcined clay particles, and(or) finely ground plastics) materials. Plant roots were brought into contact with 99% suspensions of the **soil** conditioner-growth regulator mixture

ST polymer **soil** conditioner plant stimulator
 IT Sawdust
 Kieselguhr
 Talcite
 RL: BIOL (Biological study)
 (coating material for polymeric **soil** conditioner)
 IT Peat
Soils
 Perlite
 Sand
 RL: BIOL (Biological study)
 (plant stimulator containing, manufacture of **soil** conditioner and)
 IT Plant hormones and regulators
 RL: PROC (Process)
 (growth stimulators, from natural and synthetic materials, manufacture of)
 IT 7631-86-9, uses and miscellaneous 9002-89-5
 RL: USES (Uses)
 (coating material for polymeric **soil** conditioner)
 IT 37291-07-9DP, alkali metal salts
 RL: PREP (Preparation)
 (graft, **soil** conditioner containing, manufacture of)
 IT 9003-05-8D, hydrolyzate 10192-85-5 25014-41-9D, hydrolyzate
 25322-68-3 31212-13-2
 RL: BIOL (Biological study)
 (**soil** conditioner containing, manufacture of)
 IT 31212-13-2
 RL: BIOL (Biological study)
 (**soil** conditioner containing, manufacture of)
 RN 31212-13-2 HCAPLUS
 CN 2-Propenoic acid, potassium salt, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 10192-85-5

CMF C3 H4 O2 . K

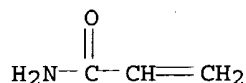


● K

CM 2

CRN 79-06-1

CMF C3 H5 N O



L37 ANSWER 27 OF 27 HCAPLUS COPYRIGHT 2004 ACS on STN

AN 1974:119612 HCAPLUS

DN 80:119612

ED Entered STN: 12 May 1984

TI Improvement of **soil** for plant growth with water soluble acrylic polymers

IN Hasegawa, Masao; Hisamatsu, Kenzo; Hosoi, Akihiko; Shibutani, Yasuyoshi

PA Nitto Chemical Industry Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

NCL 4A12; 4E2

CC 19-3 (Fertilizers, Soils, and Plant Nutrition)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 48090848	A2	19731127	JP 1972-22368	19720306 <--
	JP 53046745	B4	19781215		
PRAI	JP 1972-22368		19720306 <--		

AB Plant-growth conditions in **soils** were improved by addition to the **soil** of H₂O-soluble polymers, such as poly(vinyl alc.), polyacrylamide, and polyacrylate, using silicic acid or its mineral salts as carriers. These polymers tend to aggregate **soil** particles increasing the **soil** porosity. Thus, 90 parts diatomaceous earth, which was heated at 1100° for 2 hr, was mixed with 3 parts Na salt of acrylamide-acrylic acid copolymer and 0.18 parts Na₂CO₃; to this 70 parts of a 10% copolymer solution was further added. The final product was prepared from this mixture by drying at 80° for 2 hr and granulation.

ST **soil** acrylic polymer; diatomaceous earth **soil** polymer; silicate **soil** acrylic polymer

IT **Soils**

(conditioners for, manufacturing from water-soluble polymers)

IT 25987-30-8

RL: BIOL (Biological study)

(as **soil** conditioner)

IT 25987-30-8P

RL: PREP (Preparation)

(preparation of)

IT 25987-30-8

RL: BIOL (Biological study)

(as **soil** conditioner)

RN 25987-30-8 HCAPLUS

CN 2-Propenoic acid, polymer with 2-propenamide, sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 9003-06-9

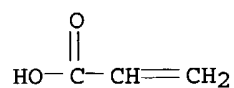
CMF (C3 H5 N O . C3 H4 O2)x

CCI PMS

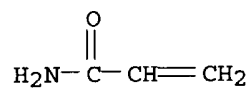
CM 2

CRN 79-10-7

CMF C3 H4 O2



CM 3

CRN 79-06-1
CMF C3 H5 N O

IT 25987-30-8P

RL: PREP (Preparation)
(preparation of)

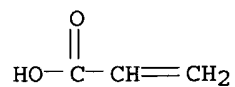
RN 25987-30-8 HCAPLUS

CN 2-Propenoic acid, polymer with 2-propenamide, sodium salt (9CI) (CA INDEX NAME)

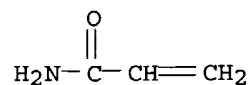
CM 1

CRN 9003-06-9
CMF (C3 H5 N O . C3 H4 O2)x
CCI PMS

CM 2

CRN 79-10-7
CMF C3 H4 O2

CM 3

CRN 79-06-1
CMF C3 H5 N O

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